

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A flame retardant polyester composition for calendering, comprising:

- (a) a polyester having a crystallization half time from a molten state of at least 5 minutes wherein said polyester is a random copolymer;
- (b) a plasticizer miscible with said polyester, wherein the plasticizer has a solubility value of 4 or greater at a temperature of 160°C or less;
- (c) a phosphorus-containing flame retardant miscible with said polyester plasticized with said plasticizer; and
- (d) an additive effective to prevent sticking of the polyester to calendering rolls ~~wherein said polyester composition has a T_g of about 10 °C to about 40 °C.~~

Claim 2 (original): The polyester composition of claim 1 wherein said plasticizer comprises one or more aromatic rings.

Claim 3 (original): The polyester composition of claim 2 wherein said plasticizer comprises about 10 to about 40 weight percent (wt%) of said polyester composition based on the total weight of said polyester composition.

Claim 4 (original): The polyester composition of claim 3 wherein said plasticizer dissolves a 5-mil (.127 mm) thick film of said polyester to produce a clear solution at a temperature of 160°C or less.

Claim 5 (original): The polyester composition of claim 4 wherein said plasticizer has a solubility parameter in the range of about 9.5 to about 13.0 $\text{cal}^{0.5}\text{cm}^{-1.5}$.

Claim 6 (original): The polyester composition of 5 wherein said plasticizer is an ester comprising

- (i) an acid residue comprising one or more of: phthalic acid, adipic acid, trimellitic acid, benzoic acid, azelaic acid, terephthalic acid, isophthalic acid, butyric acid, glutaric acid, citric acid or phosphoric acid; and
- (ii) an alcohol residue comprising one or more aliphatic, cycloaliphatic, or aromatic alcohols containing up to about 20 carbon atoms.

Claim 7 (original): The polyester composition of claim 6 wherein said alcohol residue of the plasticizer is methanol, ethanol, propanol, isopropanol, butanol, isobutanol, stearyl alcohol, lauryl alcohol, phenol, benzyl alcohol, hydroquinone, catechol, resorcinol, ethylene glycol, neopentyl glycol, 1,4-cyclohexanedimethanol, or diethylene glycol.

Claim 8 (original): The polyester composition of claim 7 wherein said crystallization half time of the polyester is at least 12 minutes.

Claim 9 (original): The polyester composition of claim 8 wherein said crystallization half time is at least 300 minutes.

Claim 10 (original): The polyester composition of claim 9 wherein said polyester comprises (i) at least 80 mole percent of diacid residues comprising one or more of: terephthalic acid, naphthalenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, or isophthalic acid; and (ii) diol residues comprising about 10 to about 100 mole percent 1,4-cyclohexanedimethanol and 0 to about 90 mole percent of one or more diols containing 2 to about 20 carbon atoms, wherein said diacid residues are based on 100 mole percent and the diol residues are based on 100 mole percent.

Claim 11 (currently amended): The polyester composition of claim 10 wherein said diol residues comprise one or more diols selected from the group consisting of ethylene glycol, 1,2-propanediol, 1,3-propanediol, propylene glycol, 1,4-butanediol, 1,5-pentanediol, neopentyl glycol, diethylene glycol, 1,6-hexanediol, 1,8-octanediol, 2,2,4-trimethyl-1,3-pentanediol, 2,2,4,4-tetramethyl-1,3-cyclobutanediol, 1,3-cyclohexanedimethanol, bisphenol A, and polyalkylene glycol.

Claim 12 (original): The polyester composition of claim 11 wherein said diol residues comprise about 10 to about 100 mole percent 1,4-cyclohexanedimethanol and 0 to about 90 mole percent ethylene glycol.

Claim 13 (original): The polyester composition of claim 12 wherein said diacid residues further comprise 0 to about 20 mole percent of one or more modifying diacids containing about 4 to about 40 carbon atoms.

Claim 14 (original): The polyester composition of claim 13 wherein said modifying diacid comprises one or more of: succinic acid, glutaric acid, adipic acid, suberic acid, sebacic acid, azelaic acid, dimer acid, or sulfoisophthalic acid.

Claim 15 (original): The polyester composition of claim 14 wherein said plasticizer comprises one or more benzoates, phthalates, phosphates, or isophthalates.

Claim 16 (original): The polyester composition of claim 15 wherein said plasticizer comprises diethylene glycol dibenzoate.

Claim 17 (original): The polyester composition of claim 16 wherein said flame retardant comprises about 5 to about 40 wt%, based on the total weight of said polyester composition, of one or more monoesters, diesters, or triesters of phosphoric acid.

Claim 18 (original): The polyester composition of claim 17 wherein said flame retardant is a plasticizer for said polyester.

Claim 19 (original): The polyester composition of claim 18 wherein said flame retardant comprises resorcinol bis(diphenyl phosphate).

Claim 20 (currently amended): The polyester composition of claim 19 wherein said polyester composition has a T_g of 30°C or less ~~about 10 °C to about 30 °C~~.

Claim 21 (currently amended): The polyester composition of claim 20 wherein said polyester composition has a T_g of 20°C or less ~~about 10 °C to about 20 °C~~.

Claim 22 (currently amended): A flame retardant polyester composition for calendering, comprising:

- (a) a polyester having a crystallization half time from a molten state of at least 10 minutes wherein said polyester is a random copolymer comprising (i) at least 80 mole percent of diacid residues comprising one or more of: terephthalic acid, naphthalenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, or isophthalic acid; and (ii) diol residues comprising about 20 to about 40 mole percent 1,4-cyclohexanediethanol and about 60 to about 80 mole percent of one or more diols containing 2 to about 20 carbon atoms, wherein said diacid residues are based on 100 mole percent and the diol residues are based on 100 mole percent;
- (b) about 10 wt% to about 40 wt% of plasticizer comprising one or more benzoates, phthalates, phosphates, or isophthalates, wherein said plasticizer is miscible with said polyester and has a solubility value of 4 or greater at a temperature of 160°C or less;
- (c) about 5 wt% to about 40 wt% of a phosphorus-containing flame retardant miscible with said polyester plasticized with said plasticizer; and

(d) an additive effective to prevent sticking of the polyester to calendering rolls
~~wherein said polyester composition has a T_g of about 10 °C to about 40 °C,~~
wherein said wt% is based upon the total weight of said polyester composition.

Claim 23 (original): The polyester composition of claim 22 wherein said additive comprises about 0.1 wt% to about 10 wt%, based on the total weight of the polyester composition, of one or more fatty acid amides, metal salts of organic acids, fatty acids, fatty acid salts, fatty acid esters, hydrocarbon waxes, ester waxes, phosphoric acid esters, chemically modified polyolefin waxes; glycerin esters, talc, or acrylic copolymers.

Claim 24 (currently amended): The polyester composition of claim 23 wherein said additive comprises erucylamide, stearamide, calcium stearate, zinc stearate, stearic acid, oleic acid, palmitic acid, paraffin wax, polyethylene waxes, polypropylene waxes, carnauba wax, glycerol monostearate, and or glycerol distearate.

Claim 25 (original): The polyester composition of claim 24 further comprising (e) an oxidative stabilizer.

Claim 26 (original): The polyester resin composition of claim 25 further comprising (f) a melt strength enhancer.

Claim 27 (original): The polyester composition of claim 23 wherein said additive comprises (i) a fatty acid or a salt of a fatty acid containing more than 18 carbon atoms and (ii) an ester wax comprising a fatty acid residue containing more than 18 carbon atoms with an alcohol residue containing from 2 to 28 carbon atoms, wherein the ratio of said fatty acid or said salt of a fatty acid to said ester wax is 1:1 or greater.

Claim 28 (original): The polyester composition of claim 27 wherein said additive is present from about 0.1 to about 2 weight percent.

Claim 29 (original): The polyester composition of claim 28 wherein said fatty acid comprises montanic acid; said salt of a fatty acid comprises one or more of: the sodium salt of montanic acid, the calcium salt of montanic acid, or the lithium salt of montanic acid; and said fatty acid residue of said ester wax comprises montanic acid.

Claim 30 (original): The polyester composition of claim 29 wherein said alcohol residue of said ester wax comprises one or more of: montanyl alcohol, ethylene glycol, butylene glycol, glycerol or pentaerythritol.

Claim 31 (original): The polyester composition of claim 30 wherein said ester wax has been partially saponified with calcium hydroxide.

Claim 32 (original): The polyester composition of claim 31 wherein the ratio of said fatty acid or said salt of a fatty acid to said ester wax is 2:1 or greater.

Claim 33 (currently amended): A process for preparing a flame retardant film or a sheet, comprising:
calendering a polyester composition comprising
(a) a polyester having a crystallization half time from a molten state of at least 5 minutes, wherein said polyester is a random copolymer;
(b) a plasticizer miscible with said polyester, wherein the plasticizer has a solubility value of 4 or greater at a temperature of 160°C or less;
(c) a phosphorus-containing flame retardant miscible with said polyester plasticized with said plasticizer; and
(d) an additive effective to prevent sticking of the polyester to calendering rolls.

Claim 34 (original): The process of claim 33 wherein said plasticizer comprises one or more aromatic rings.

Claim 35 (original): The process of claim 34 wherein said plasticizer comprises about 10 to about 40 wt% of said polyester composition based on the total weight of said polyester composition.

Claim 36 (original): The process of claim 35 wherein said plasticizer dissolves a 5-mil (.127 mm) thick film of said polyester to produce a clear solution at a temperature of 160°C or less.

Claim 37 (original): The process of claim 36 wherein said plasticizer has a solubility parameter in the range of about 9.5 to about $13.0 \text{ cal}^{0.5} \text{ cm}^{-1.5}$.

Claim 38 (original): The process of 37 wherein said plasticizer is an ester comprising

- (i) an acid residue comprising one or more of: phthalic acid, adipic acid, trimellitic acid, benzoic acid, azelaic acid, terephthalic acid, isophthalic acid, butyric acid, glutaric acid, citric acid or phosphoric acid; and
- (ii) an alcohol residue comprising one or more of: methanol, ethanol, propanol, isopropanol, butanol, isobutanol, stearyl alcohol, lauryl alcohol, phenol, benzyl alcohol, hydroquinone, catechol, resorcinol, ethylene glycol, neopentyl glycol, 1,4-cyclohexanedimethanol, or diethylene glycol.

Claim 39 (original): The process of claim 38 wherein said polyester composition comprises a molten, pellet or powder form and is passed through a compressive nip between at least two calendering rolls at temperatures of about 100°C to about 200°C.

Claim 40 (original): The process of claim 39 wherein said polyester has a crystallization half time of at least 300 minutes.

Claim 41 (currently amended): The process of claim 40 wherein said polyester comprises (i) at least 80 mole percent of diacid residues comprising one or more of: terephthalic acid, naphthalenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, or isophthalic acid; and (ii) diol residues comprising about 10 to about 100 mole percent 1,4-cyclohexanediethanol and 0 to about 90 mole percent of one or more diols selected from the group consisting of ethylene glycol, 1,2-propanediol, 1,3-propanediol, propylene glycol, 1,4-butanediol, 1,5-pentanediol, neopentyl glycol, diethylene glycol, 1,6-hexanediol, 1,8-octanediol, 2,2,4-trimethyl-1,3-pentanediol, 2,2,4,4-tetramethyl-1,3-cyclobutanediol, 1,3-cyclohexanediethanol, bisphenol A, and polyalkylene glycol, wherein said diacid residues are based on 100 mole percent and said diol residues are based on 100 mole percent.

Claim 42 (original): The process of claim 41 wherein said diol residues comprise about 10 to about 100 mole percent 1,4-cyclohexanediethanol and 0 to about 90 mole percent ethylene glycol.

Claim 43 (currently amended): The polyester composition process of claim 42 wherein said plasticizer comprises one or more benzoates, phthalates, phosphates, or isophthalates.

Claim 44 (currently amended): The polyester composition process of claim 43 wherein said plasticizer comprises diethylene glycol dibenzoate.

Claim 45 (original): The process of claim 44 wherein said flame retardant comprises about 5 to about 40 wt%, based on the total weight of said polyester composition, of one or more monoesters, diesters, or triesters of phosphoric acid.

Claim 46 (original): The process of claim 45 wherein said flame retardant is a plasticizer for said polyester.

Claim 47 (original): The process of claim 46 wherein said flame retardant comprises resorcinol bis(diphenyl phosphate).

Claim 48 (original): The process of claim 47 wherein said polyester composition has a T_g of 30°C or less.

Claim 49 (original): The process of claim 48 wherein said additive comprises about 0.1 wt% to about 10 wt%, based on the total weight of the polyester composition, of one or more fatty acid amides, metal salts of organic acids, fatty acids, fatty acid salts, fatty acid esters, hydrocarbon waxes, ester waxes, phosphoric acid esters, chemically modified polyolefin waxes; glycerin esters, talc, or acrylic copolymers.

Claim 50 (original): The process of claim 49 wherein said additive comprises (i) a fatty acid or a salt of a fatty acid containing more than 18 carbon atoms and (ii) an ester wax comprising a fatty acid residue containing more than 18 carbon atoms and an alcohol residue containing from 2 to 28 carbon atoms, wherein the ratio of said fatty acid or said salt of a fatty acid to said ester wax is 1:1 or greater.

Claim 51 (original): The process of claim 50 wherein said fatty acid comprises montanic acid; said salt of a fatty acid comprises one or more of: the sodium salt of montanic acid, the calcium salt of montanic acid, or the lithium salt of montanic acid; and said fatty acid residue of said ester wax comprises montanic acid.

Claim 52 (currently amended): A flame retardant film or sheet comprising a polyester composition, said polyester composition comprising

- (a) a polyester having a crystallization half time from a molten state of at least 5 minutes, wherein said polyester is a random copolymer;
- (b) a plasticizer miscible with said polyester, wherein the plasticizer has a solubility value of 4 or greater at a temperature of 160°C or less;
- (c) an phosphorus-containing flame retardant miscible with said polyester plasticized with said plasticizer; and

- (d) an additive effective to prevent sticking of the polyester to calendering rolls, wherein said film or sheet is prepared by calendering said polyester composition.

Claim 53 (original): The film or sheet of claim 52 wherein said plasticizer comprises one or more aromatic rings.

Claim 54 (original): The film or sheet of claim 53 wherein said plasticizer comprises about 10 to about 40 wt% of said polyester composition based on the total weight of said polyester composition.

Claim 55 (original): The film or sheet of claim 54 wherein said plasticizer dissolves a 5-mil (.127 mm) thick film of said polyester to produce a clear solution at a temperature of 160°C or less.

Claim 56 (original): The film or sheet of claim 55 wherein said plasticizer has a solubility parameter in the range of about 9.5 to about 13.0 cal^{0.5}cm^{-1.5}.

Claim 57 (original): The film or sheet of 56 wherein said plasticizer is an ester comprising

- (i) an acid residue comprising one or more of: phthalic acid, adipic acid, trimellitic acid, benzoic acid, azelaic acid, terephthalic acid, isophthalic acid, butyric acid, glutaric acid, citric acid or phosphoric acid; and
- (ii) an alcohol residue comprising one or more of: methanol, ethanol, propanol, isopropanol, butanol, isobutanol, stearyl alcohol, lauryl alcohol, phenol, benzyl alcohol, hydroquinone, catechol, resorcinol, ethylene glycol, neopentyl glycol, 1,4-cyclohexanedimethanol, or diethylene glycol.

Claim 58 (original): The film or sheet of claim 57 wherein said polyester has a crystallization half time of at least 300 minutes.

Claim 59 (currently amended): The film or sheet of claim 58 wherein said polyester comprises (i) at least 80 mole percent of diacid residues comprising one or more of: terephthalic acid, naphthalenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, or isophthalic acid; and (ii) diol residues comprising about 10 to about 100 mole percent 1,4-cyclohexanediethanol and 0 to about 90 mole percent of one or more diols selected from the group consisting of ethylene glycol, 1,2-propanediol, 1,3-propanediol, propylene glycol, 1,4-butanediol, 1,5-pentanediol, neopentyl glycol, diethylene glycol, 1,6-hexanediol, 1,8-octanediol, 2,2,4-trimethyl-1,3-pantanediol, 2,2,4,4-tetramethyl-1,3-cyclobutanediol, 1,3-cyclohexanediethanol, bisphenol A, and polyalkylene glycol, wherein said diacid residues are based on 100 mole percent and said diol residues are based on 100 mole percent.

Claim 60 (original): The film or sheet of claim 59 wherein said diol residues comprise about 10 to about 100 mole percent 1,4-cyclohexanediethanol and 0 to about 90 mole percent ethylene glycol.

Claim 61 (previously presented): The film or sheet of claim 60 wherein said plasticizer comprises one or more benzoates, phthalates, phosphates, or isophthalates.

Claim 62 (previously presented): The film or sheet of claim 61 wherein said plasticizer comprises diethylene glycol dibenzoate.

Claim 63 (original): The film or sheet of claim 62 wherein said flame retardant comprises about 5 to about 40 wt%, based on the total weight of said polyester composition, of one or more monoesters, diesters, or triesters of phosphoric acid.

Claim 64 (original): The film or sheet of claim 63 wherein said flame retardant is a plasticizer for said polyester.

Claim 65 (original): The film or sheet of claim 64 wherein said flame retardant comprises resorcinol bis(diphenyl phosphate).

Claim 66 (original): The film or sheet of claim 65 wherein said polyester composition has a T_g of 30°C or less.

Claim 67 (original): The film or sheet of claim 66 wherein said additive about 0.1 wt% to about 10 wt%, based on the total weight of the polyester composition, of one or more fatty acid amides, metal salts of organic acids, fatty acids, fatty acid salts, fatty acid esters, hydrocarbon waxes, ester waxes, phosphoric acid esters, chemically modified polyolefin waxes; glycerin esters, talc, or acrylic copolymers.

Claim 68 (original): The film or sheet of claim 67 wherein said additive comprises (i) a fatty acid or a salt of a fatty acid containing more than 18 carbon atoms and (ii) an ester wax comprising a fatty acid residue containing more than 18 carbon atoms and an alcohol residue containing from 2 to 28 carbon atoms, wherein the ratio of said fatty acid or said salt of a fatty acid to said ester wax is 1:1 or greater.

Claim 69 (original): The film or sheet of claim 68 wherein said fatty acid comprises montanic acid; said salt of a fatty acid comprises one or more of: the sodium salt of montanic acid, the calcium salt of montanic acid, or the lithium salt of montanic acid; and said fatty acid residue of said ester wax comprises montanic acid.

Claim 70 (currently amended): A flame retardant polyester composition for calendering, comprising:

- (a) about 50 to about 95 weight percent of a polyester having a melting temperature of less than 220°C and exhibiting more than 1 percent crystallinity after annealing for 2000 minutes at a temperature at which said polyester has a maximum crystallization rate, wherein said polyester is a random copolymer;

- (b) about 5 to about 50 wt% of a plasticizer miscible with said polyester, based on the total weight of said polyester composition, wherein the plasticizer has a solubility value of 4 or greater at a temperature of 160°C or less; and
- (c) a phosphorus-containing flame retardant miscible with said polyester plasticized with said plasticizer ~~wherein said polyester composition has a T_g of about 10 °C to about 40 °C~~.

Claim 71 (original): The polyester composition of claim 70 wherein said plasticizer comprises one or more aromatic rings.

Claim 72 (original): The polyester composition of claim 71 further comprising (d) an additive effective to prevent sticking of the polyester to the calender rolls.

Claim 73 (original): The polyester composition of claim 72 wherein said plasticizer comprises about 10 to about 40 wt% of said polyester composition based on the total weight of said polyester composition.

Claim 74 (original): The polyester composition of claim 73 wherein said plasticizer dissolves a 5-mil (.127 mm) thick film of said polyester to produce a clear solution at a temperature of 160°C or less.

Claim 75 (original): The polyester composition of claim 74 wherein said plasticizer has a solubility parameter in the range of about 9.5 to about 13.0 cal^{0.5}cm^{-1.5}.

Claim 76 (original): The polyester composition of 75 wherein said plasticizer is an ester comprising

- (i) an acid residue comprising one or more of: phthalic acid, adipic acid, trimellitic acid, benzoic acid, azelaic acid, terephthalic acid, isophthalic acid, butyric acid, glutaric acid, citric acid or phosphoric acid; and

- (ii) an alcohol residue comprising one or more of: methanol, ethanol, propanol, isopropanol, butanol, isobutanol, stearyl alcohol, lauryl alcohol, phenol, benzyl alcohol, hydroquinone, catechol, resorcinol, ethylene glycol, neopentyl glycol, 1,4-cyclohexanedimethanol, or diethylene glycol.

Claim 77 (currently amended): The polyester composition of claim 76 wherein said polyester comprises (i) at least 80 mole percent of diacid residues comprising one or more of: terephthalic acid, naphthalenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, or isophthalic acid; and (ii) diol residues comprising about 10 to about 100 mole percent 1,4-cyclohexanedimethanol and 0 to about 90 mole percent of one or more diols selected from the group consisting of ethylene glycol, 1,2-propanediol, 1,3-propanediol, propylene glycol, 1,4-butanediol, 1,5-pentanediol, neopentyl glycol, diethylene glycol, 1,6-hexanediol, 1,8-octanediol, 2,2,4-trimethyl-1,3-pentanediol, 2,2,4,4-tetramethyl-1,3-cyclobutanediol, 1,3-cyclohexanedimethanol, bisphenol A, and polyalkylene glycol, wherein said diacid residues are based on 100 mole percent and said diol residues are based on 100 mole percent.

Claim 78 (original): The polyester composition of claim 77 wherein said diol residues comprise about 10 to about 100 mole percent 1,4-cyclohexanedimethanol and 0 to about 90 mole percent ethylene glycol.

Claim 79 (original): The polyester composition of claim 78 wherein said plasticizer comprises one or more benzoates, phthalates, phosphates, or isophthalates.

Claim 80 (original): The polyester composition of claim 79 wherein said plasticizer comprises diethylene glycol dibenzoate.

Claim 81 (original): The polyester composition of claim 80 wherein said flame retardant comprises about 5 to about 40 wt%, based on the total weight of said polyester composition, of one or more monoesters, diesters, or triesters of phosphoric acid.

Claim 82 (original): The polyester composition of claim 81 wherein said flame retardant is a plasticizer for said polyester.

Claim 83 (original): The polyester composition of claim 82 wherein said flame retardant comprises resorcinol bis(diphenyl phosphate).

Claim 84 (currently amended): The polyester composition of claim 83 wherein said polyester composition has a T_g of 30°C or less of about 10°C to about 30°C.

Claim 85 (currently amended): A process for preparing a flame retardant film or a sheet, comprising:

- (i) calendering a polyester composition comprising
 - (a) about 50 to about 95 weight percent of a polyester having a melting temperature of less than 220°C and exhibiting more than 1 percent crystallinity after annealing for 2000 minutes at a temperature at which said polyester has a maximum crystallization rate, wherein said polyester is a random copolymer;
 - (b) about 5 to about 50 wt% of a plasticizer miscible with said polyester, based on the total weight of said polyester composition, wherein the plasticizer has a solubility value of 4 or greater at a temperature of 160°C or less; and
 - (c) a phosphorus-containing flame retardant miscible with said polyester plasticized with said plasticizer; and
- (ii) inducing crystallization during step (i) or after step (i).

Claim 86 (original): The process of claim 85 wherein said plasticizer comprises one or more aromatic rings.

Claim 87 (original): The process of claim 86 wherein said plasticizer comprises about 10 to about 40 wt% of said polyester composition based on the total weight of said polyester composition.

Claim 88 (original): The process of claim 87 wherein said plasticizer dissolves a 5-mil (.127 mm) thick film of said polyester to produce a clear solution at a temperature of 160°C or less.

Claim 89 (original): The process of claim 88 wherein said plasticizer has a solubility parameter in the range of about 9.5 to about $13.0 \text{ cal}^{0.5} \text{ cm}^{-1.5}$.

Claim 90 (original): The process of 89 wherein said plasticizer is an ester comprising

- (i) an acid residue comprising one or more of: phthalic acid, adipic acid, trimellitic acid, benzoic acid, azelaic acid, terephthalic acid, isophthalic acid, butyric acid, glutaric acid, citric acid or phosphoric acid; and
- (ii) an alcohol residue comprising one or more of methanol, ethanol, propanol, isopropanol, butanol, isobutanol, stearyl alcohol, lauryl alcohol, phenol, benzyl alcohol, hydroquinone, catechol, resorcinol, ethylene glycol, neopentyl glycol, 1,4-cyclohexanedimethanol, or diethylene glycol.

Claim 91 (currently amended): The process of claim 90 wherein said polyester comprises (i) at least 80 mole percent of diacid residues comprising one or more of: terephthalic acid, naphthalenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, or isophthalic acid; and (ii) diol residues comprising about 10 to about 100 mole percent 1,4-cyclohexanedimethanol and 0 to about 90 mole percent of one or more diols selected from the group consisting of ethylene glycol, 1,2-propanediol, 1,3-propanediol, propylene glycol, 1,4-butanediol, 1,5-pentanediol, neopentyl glycol, diethylene glycol, 1,6-hexanediol, 1,8-octanediol, 2,2,4-trimethyl-1,3-pentanediol, 2,2,4,4-tetramethyl-1,3-cyclobutanediol, 1,3-cyclohexanedimethanol, bisphenol A, and polyalkylene glycol, wherein said

diacid residues are based on 100 mole percent and said diol residues are based on 100 mole percent.

Claim 92 (original): The process of claim 91 wherein said diol residues comprise about 10 to about 100 mole percent 1,4-cyclohexanedimethanol and 0 to about 90 mole percent ethylene glycol.

Claim 93 (previously presented): The process of claim 92 wherein said plasticizer comprises one or more benzoates, phthalates, phosphates, or isophthalates.

Claim 94 (previously presented): The process of claim 93 wherein said plasticizer comprises diethylene glycol dibenzoate.

Claim 95 (original): The process of claim 94 wherein said flame retardant comprises about 5 to about 40 wt%, based on the total weight of said polyester composition, of one or more monoesters, diesters, or triesters of phosphoric acid.

Claim 96 (original): The process of claim 95 wherein said flame retardant is a plasticizer for said polyester.

Claim 97 (original): The process of claim 96 wherein said flame retardant comprises resorcinol bis(diphenyl phosphate).

Claim 98 (original): The process of claim 97 wherein said polyester composition has a T_g of 30°C or less.

Claim 99 (original): The process of claim 98 wherein said polyester composition comprises a molten, pellet or powder form and is passed through a compressive nip between at least two calendering rolls at temperatures of about 100°C to about 200°C.

Claim 100 (currently amended): A flame retardant film or sheet, comprising:

- (a) about 50 to about 95 weight percent of a polyester having a melting temperature of less than 220°C and exhibiting more than 1 percent crystallinity after annealing for 2000 minutes at a temperature at which said polyester has a maximum crystallization rate, wherein said polyester is a random copolymer;
- (b) about 5 to about 50 weight percent of a plasticizer miscible with said polyester, wherein the plasticizer has a solubility value of 4 or greater at a temperature of 160°C or less; and
- (c) a phosphorus-containing flame retardant miscible with said polyester plasticized with said plasticizer.

Claim 101 (original): The film or sheet of claim 100 wherein said plasticizer comprises one or more aromatic rings.

Claim 102 (original): The film or sheet of claim 101 wherein said plasticizer comprises about 10 to about 40 wt% of said polyester composition based on the total weight of said polyester composition.

Claim 103 (original): The film or sheet of claim 102 wherein said plasticizer dissolves a 5-mil (.127 mm) thick film of said polyester to produce a clear solution at a temperature of 160°C or less.

Claim 104 (original): The film or sheet of claim 103 wherein said plasticizer has a solubility parameter in the range of about 9.5 to about 13.0 $\text{cal}^{0.5} \text{cm}^{-1.5}$.

Claim 105 (original): The film or sheet of 104 wherein said plasticizer is an ester comprising

- (i) an acid residue comprising one or more of: phthalic acid, adipic acid, trimellitic acid, benzoic acid, azelaic acid, terephthalic acid, isophthalic acid, butyric acid, glutaric acid, citric acid or phosphoric acid; and

- (ii) an alcohol residue comprising one or more of methanol, ethanol, propanol, isopropanol, butanol, isobutanol, stearyl alcohol, lauryl alcohol, phenol, benzyl alcohol, hydroquinone, catechol, resorcinol, ethylene glycol, neopentyl glycol, 1,4-cyclohexanedimethanol, or diethylene glycol.

Claim 106 (currently amended): The film or sheet of claim 105 wherein said polyester comprises (i) at least 80 mole percent of diacid residues comprising one or more of: terephthalic acid, naphthalenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, or isophthalic acid; and (ii) diol residues comprising about 10 to about 100 mole percent 1,4-cyclohexanedimethanol and 0 to about 90 mole percent of one or more diols selected from the group consisting of ethylene glycol, 1,2-propanediol, 1,3-propanediol, propylene glycol, 1,4-butanediol, 1,5-pentanediol, neopentyl glycol, diethylene glycol, 1,6-hexanediol, 1,8-octanediol, 2,2,4-trimethyl-1,3-pentanediol, 2,2,4,4-tetramethyl-1,3-cyclobutanediol, 1,3-cyclohexanedimethanol, bisphenol A, and polyalkylene glycol, wherein said diacid residues are based on 100 mole percent and said diol residues are based on 100 mole percent.

Claim 107 (original): The film or sheet of claim 106 wherein said diol residues comprise about 10 to about 100 mole percent 1,4-cyclohexanedimethanol and 0 to about 90 mole percent ethylene glycol.

Claim 108 (previously presented): The film or sheet of claim 107 wherein said plasticizer comprises one or more benzoates, phthalates, phosphates, or isophthalates.

Claim 109 (previously presented): The film or sheet of claim 108 wherein said plasticizer comprises diethylene glycol dibenzoate.

Claim 110 (original): The film or sheet of claim 109 wherein said flame retardant comprises about 5 to about 40 wt%, based on the total weight of said polyester composition, of one or more monoesters, diesters, or triesters of phosphoric acid.

Claim 111 (original): The film or sheet of claim 110 wherein said flame retardant is a plasticizer for said polyester.

Claim 112 (original): The film or sheet of claim 111 wherein said flame retardant comprises resorcinol bis(diphenyl phosphate).

Claim 113 (original): The film or sheet of claim 112 wherein said polyester composition has a T_g of 30°C or less.